

Advanced  
Engineering

Hitachi Tool

HITACHI  
Inspire the Next

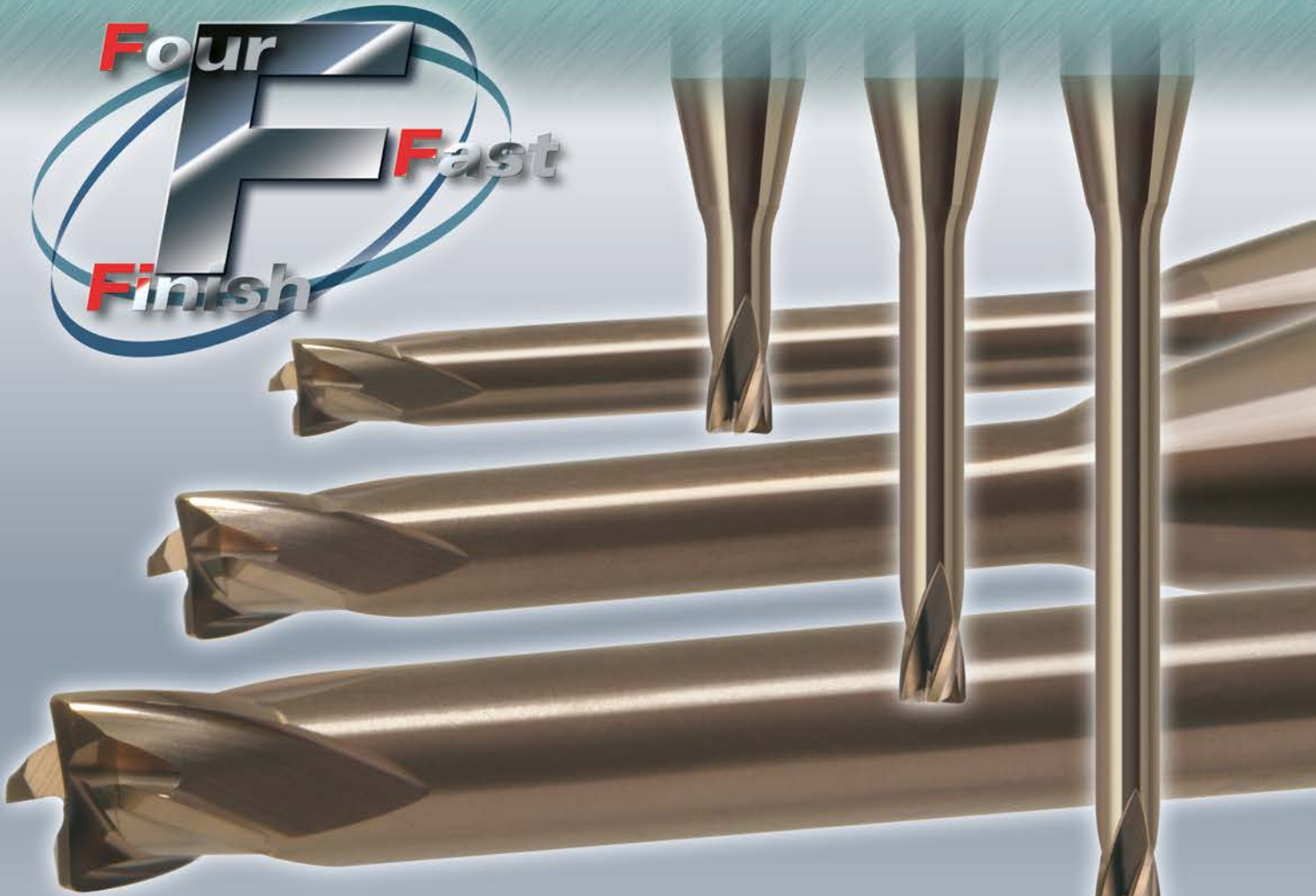
Epoch21

Nano-PVD Coating  
TH45+

No. 424.2

**EPDRF-TH** *Epoch Deep Radius F*  
Solid Carbide 4-flute Corner Radius End Mill  
D 1 - 4 mm

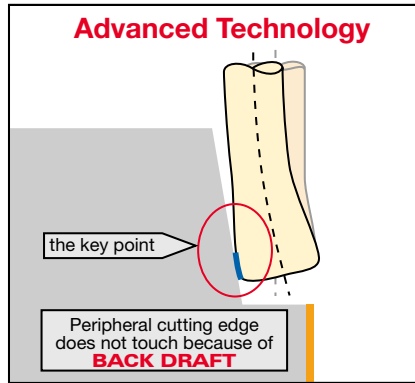
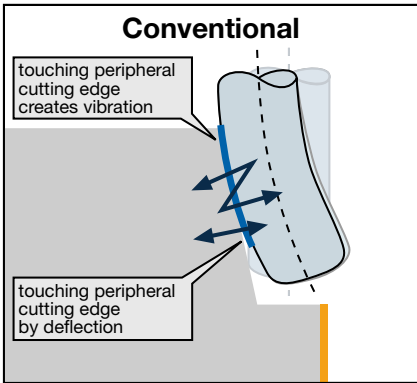
**Four**  
**F** **Fast**  
**Finish**



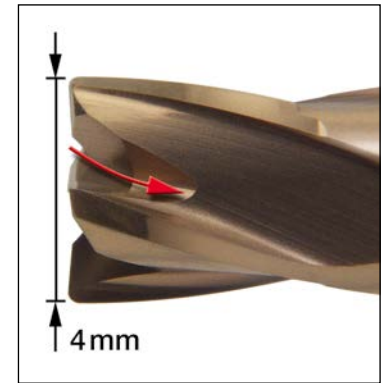
+/- 5  $\mu$ m  
Corner R  
Accuracy

**Micro Grain Solid Carbide End Mill**

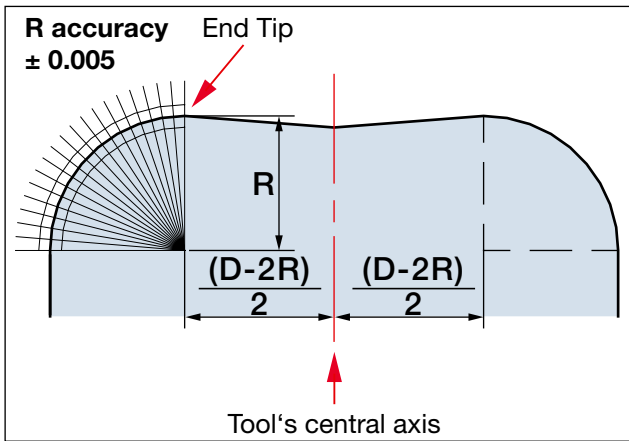
**Advanced Technology – Back Draft**



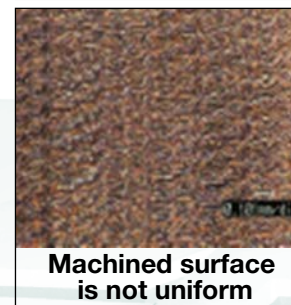
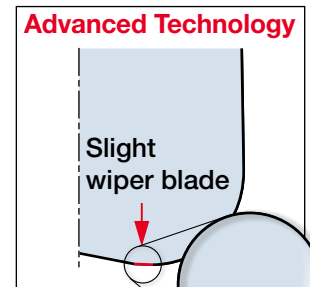
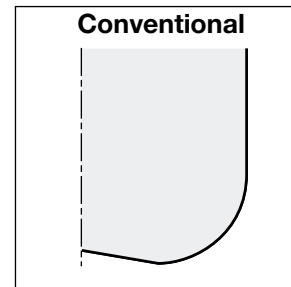
**Smooth Chip Removal**



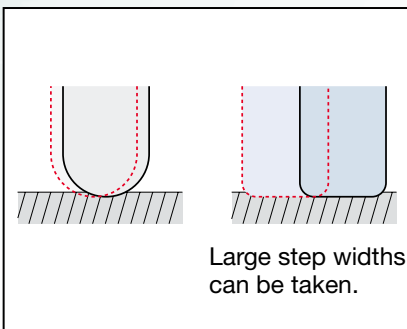
**Unprecedented high corner R accuracy**



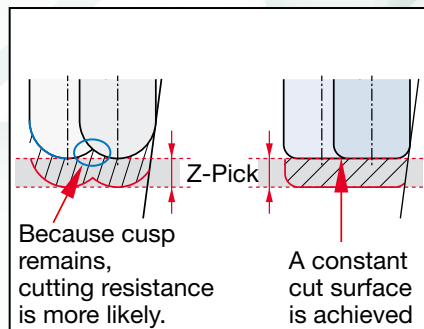
**Bottom flute wiper effect**



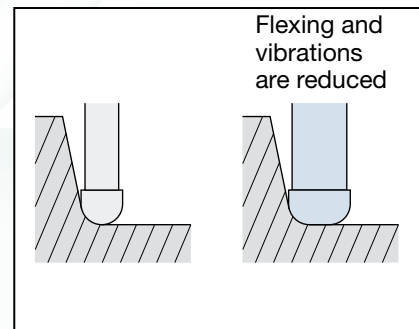
**Features of radius end mill compared with ball end mill**



**1. Difference in step width**



**2. Difference in stability**



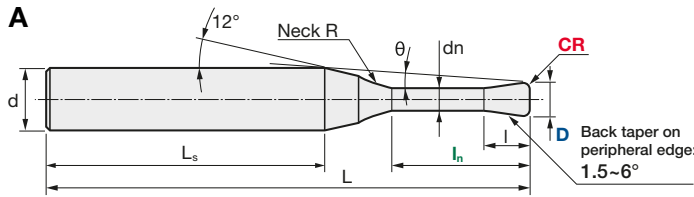
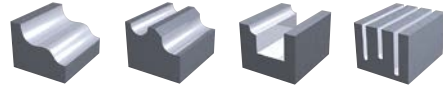
**3. Difference in rigidity**



**Micro Grain Solid Carbide End Mill**

**EPDRF-TH | Epoch Deep Radius F**

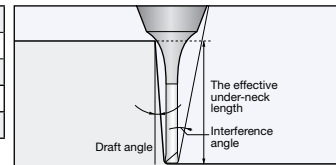
**V max**  
High Speed
**Q max**  
High Efficient
**▽**  
Roughing
**▽▽**  
Semi-Finishing
**▽▽▽**  
Finishing
**HRC**  
70
**No. of Teeth**  
4



※ Back Draft is not available for Diameters 4–6 mm

**Carbide**  
Micro Grain
**TH45+**  
Nano-PVD Coating
**Rake Angle**  
Positive

D	0 / -0.01
CR	± 0.005
d	h5
Helix angle	20°
Backdraft	D 1–3



ID Code	Item Code	Z	Size								Actual Effective Length in Incline Angles																
			D	CR	In	l	dn	Ls	L	d	Neck R	θ°	0.5°	1°	1.5°	2°	3°										
EP716	EPDRF-4010-4-005-TH	4	1	0.05	4	0.8	0.94	38.81	50	60	4	7.67	4.75	4.95	5.13	5.28	5.56										
EP717	EPDRF-4010-6-005-TH				6								6.84	7.09	7.30	7.49	8.13										
EP718	EPDRF-4010-8-005-TH				8								34.81	5.66	8.92	9.21	9.46	9.73	10.78								
EP719	EPDRF-4010-10-005-TH				10								32.81	5.00	10.99	11.32	11.59	12.12	13.44								
EP720	EPDRF-4010-12-005-TH				12								40.81	4.48	13.06	13.42	13.84	14.51	16.09								
EP721	EPDRF-4010-16-005-TH				16								36.81	3.71	17.18	17.60	18.40	19.30	21.40								
EP722	EPDRF-4010-20-005-TH				20								32.81	3.17	21.29	21.93	22.96	24.09	26.71								
EP723	EPDRF-4010-4-01-TH				4								0.1	4	1.35	1.42	38.81	50	60	4	7.70	4.74	4.95	5.12	5.28	5.55	
EP724	EPDRF-4010-6-01-TH				6									6.83								7.09	7.30	7.49	8.11		
EP725	EPDRF-4010-8-01-TH				8									34.81								5.68	8.91	9.21	9.45	9.72	10.77
EP726	EPDRF-4010-10-01-TH		10	32.81	5.02	10.99	11.32	11.59	12.11	13.42																	
EP727	EPDRF-4010-12-01-TH		12	40.81	4.50	13.06	13.42	13.83	14.50	16.08																	
EP728	EPDRF-4010-16-01-TH		16	36.81	3.72	17.18	17.60	18.39	19.29	21.39																	
EP729	EPDRF-4010-20-01-TH		20	32.81	3.17	21.29	21.93	22.95	24.08	26.70																	
EP730	EPDRF-4015-4-01-TH		4	1.5	4	1.7	1.92	39.94	50	60	4	7.15		4.80								4.99	5.16	5.31	5.58		
EP731	EPDRF-4015-8-01-TH		8		8.96									9.24								9.48	9.77	10.83			
EP732	EPDRF-4015-12-01-TH		12		41.94									3.98								13.09	13.45	13.88	14.56	16.14	
EP733	EPDRF-4015-15-01-TH		15		38.94								3.42	16.18	16.58	17.30	18.15	20.12									
EP734	EPDRF-4015-20-01-TH		20		33.94								2.76	21.32	21.98	23.01	24.13	x									
EP735	EPDRF-4020-4-005-TH		4		2								0.05	4	2	2.4	41.11	50	60	4	6.46	4.80	4.99	5.16	5.31	5.59	
EP736	EPDRF-4020-8-005-TH	8	37.11											4.46								8.96	9.25	9.48	9.78	10.85	
EP737	EPDRF-4020-12-005-TH	12	43.11											3.40								13.09	13.45	13.89	14.57	16.16	
EP738	EPDRF-4020-16-005-TH	16	39.11											2.75								17.21	17.63	18.45	19.36	x	
EP739	EPDRF-4020-20-005-TH	20	35.11											2.31								21.32	21.98	23.01	24.14	x	
EP740	EPDRF-4020-4-01-TH	4	0.1	4		2.5	2.86	41.11	50	60	4	6.49		4.80								4.99	5.16	5.31	5.58		
EP741	EPDRF-4020-8-01-TH	8		37.11										4.47								8.96	9.24	9.48	9.77	10.83	
EP742	EPDRF-4020-12-01-TH	12		43.11										3.41								13.09	13.45	13.88	14.56	16.14	
EP743	EPDRF-4020-16-01-TH	16		39.11										2.76								17.21	17.62	18.44	19.35	x	
EP744	EPDRF-4020-20-01-TH	20		35.11										2.31								21.32	21.98	23.01	24.13	x	
EP745	EPDRF-4025-8-01-TH	8		2.5	0.1								8	4	3.9	38.24	50	60	6	3.68	9.00	9.27	9.51	9.83	10.89		
EP746	EPDRF-4025-16-01-TH	16											40.24								2.19	17.24	17.67	18.50	19.40	x	
EP747	EPDRF-4025-20-01-TH	20											36.24								1.82	21.35	22.03	23.06	x	x	
EP748	EPDRF-4025-8-02-TH	8											38.24								3.72	8.99	9.27	9.50	9.81	10.86	
EP749	EPDRF-4025-16-02-TH	16											40.24								2.20	17.24	17.67	18.48	19.38	x	
EP750	EPDRF-4025-20-02-TH	20	36.24			1.83	21.34	22.02	23.05	x	x																
EP751	EPDRF-4030-8-02-TH	8	3			0.2	8	4	3.9	44.62	60	80	6								5.65	9.07	9.33	9.55	9.92	10.99	
EP752	EPDRF-4030-12-02-TH	12					40.62															4.48	13.19	13.52	14.03	14.71	16.30
EP753	EPDRF-4030-16-02-TH	16					36.62															3.71	17.30	17.77	18.59	19.50	21.60
EP754	EPDRF-4030-20-02-TH	20					42.62															3.16	21.40	22.13	23.15	24.28	26.91
EP755	EPDRF-4030-25-02-TH	25		37.62	2.67		26.51							27.57	28.86	30.27	x										
EP756	EPDRF-4030-30-02-TH	30		42.62	2.31		31.62							33.02	34.56	36.25	x										
EP757	EPDRF-4040-12-02-TH	12		4	0.2		12							4	3.9	43.07	60	80	6	3.42		13.12	13.47	13.92	14.60	16.17	
EP758	EPDRF-4040-20-02-TH	20					35.07															2.32	21.34	22.02	23.05	24.17	x
EP759	EPDRF-4040-30-02-TH	30					45.07															1.65	31.57	32.92	34.45	x	x
EP760	EPDRF-4040-40-02-TH	40					35.07															1.29	41.94	43.81	x	x	x

x = no contact

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